

Notice of Allowability

Application No.

10/830,155

Examiner

Jean E. Lesperance

Applicant(s)

LEELEY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed July 5, 2007.
2. ☒ The allowed claim(s) is/are 1-104.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

RICHARD HJERPE

SENIOR PATENT EXAMINER
TECHNOLOGY CENTER 2600

DETAILED ACTION

1. The amendment filed July 5, 2007 is entered and claims 1-104 are pending.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephen Ackerman (Reg. No. 37,761) on September 11, 2007.

Please amend claims 87 and 95 as follows:

Regarding claims 87 and 95, lines 2 and 3, replace [the display controller device and the MLA common sub-groups of the display unit] by a display controller device and an MLA common sub-groups of a display unit.

Allowable Subject Matter

3. Claims 1 to 104 are allowed.
4. The following is an examiner's statement of reasons for allowance: the claimed invention is directed to a Multi Line Addressing Liquid Crystal Display system.

Independent claim 1 identifies a uniquely distinct feature "a display controller device, wherein the lines for each common sub-group, each common sub-group comprising more than one consecutive lines, between said display unit and said display controller device are interlaced from top to bottom of the display unit in a way that a first

common sub-group is driven from a first side of the display controller device, a second common sub-group is driven from the opposite to first side of the display controller device, a third sub-group is driven from the first side again, a fourth common sub-group is driven from said opposite side again, and so on until the bottom of the display unit is reached”.

Independent claim 9 identifies a uniquely distinct feature “a display controller device, wherein a number of MLA common sub-groups, each common sub-group comprising more than one consecutive lines, are bundled into MLA common groups and the lines for each common group between said display unit and said display controller device are interlaced from top to bottom of the display unit in a way that a first MLA common group is driven from a first side of the display controller device, a second common group is driven from the opposite to first side of the display controller device, a third common group is driven from the first side again, a fourth common group is driven from said opposite side again, and so on until the bottom of the display unit is reached”.

Independent claim 19 identifies a uniquely distinct feature “a display controller device, wherein a number of consecutive common signal lines are bundled into common signal groups and the lines for each common signal group between said display unit and said display controller device are interlaced from top to bottom of the display unit in a way that a first common signal group is driven from a first side of the display controller device, a second common signal group is driven from the opposite to first side of the display controller device, a third common signal group is driven from the

first side again, a fourth common signal group is driven from said opposite side again, and so on until the bottom of the display unit is reached”.

Independent claims 27, 35, 87, and 95 identify a uniquely distinct feature “interlace lines of MLA common sub-groups alternately from both sides of the display control device to the correspondent sides of the display unit in a way that the uppermost MLA sub-group is driven from a first side of the MLA display control device, the second uppermost MLA sub-group is driven from the side opposite to said first side, the third uppermost MLA sub-group is driven from said first side again and so on”.

Independent claims 43 and 69 identify a uniquely distinct feature “a display controller device, wherein the lines for each common sub-group, each common sub-group comprising more than one consecutive lines, between said display unit and said display controller device are interlaced in a way that a first common sub-group is driven from a first side of the display controller device, a second common sub-group is driven from the opposite to first side of the display controller device, a third sub-group is driven from the first side again, a fourth common sub-group is driven from said opposite side again, and so on until all common sub-groups are connected between said display unit and said display controller device”.

Independent claim 51 identifies a uniquely distinct feature “a display controller device, wherein a number of MLA common sub-groups, each common sub-group comprising more than one consecutive lines, are bundled into MLA common groups and the lines for each common group between said display unit and said display controller device are interlaced in a way that a first MLA common group is driven from a first side

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of the display controller device, a second common group is driven from the opposite to first side of the display controller device, a third common group is driven from the first side again, a fourth common group is driven from said opposite side again, and so on until all MLA common groups are connected between said display unit and said display controller device”.

Independent claims 61 and 78 identify a uniquely distinct feature “a display controller device, wherein a number of consecutive common signal lines are bundled into common signal groups and the lines for each common signal group between said display unit and said display controller device are interlaced in a way that a first common signal group is driven from a first side of the display controller device, a second common signal group is driven from the opposite to first side of the display controller device, a third common signal group is driven from the first side again, a fourth common signal group is driven from said opposite side again, and so on until all common signal groups are connected between said display unit and said display controller device”.

The closest art, Leroux et al. as discussed in the previous Office Action, either singularly or in combination, fails to anticipate or render obvious the above limitations obvious.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (571) 272-7692. The examiner can normally be reached on from Monday to Friday between 10:00AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



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Date 9/11/2007



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600